

(No Model.)

E. BLACKMAN

LAMP BURNER.

No. 346,890.

Patented Aug. 10, 1886.

Fig. 1

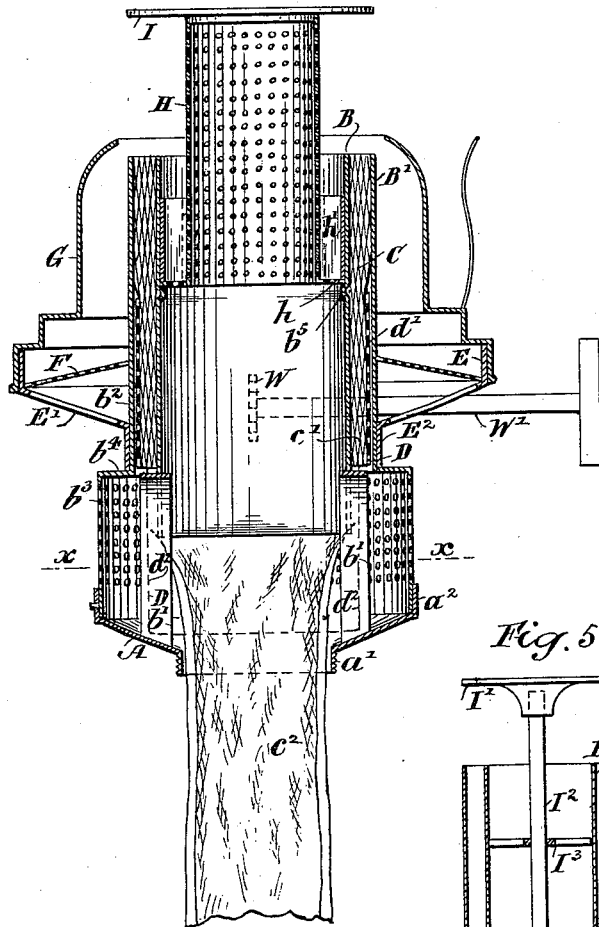


Fig. 2

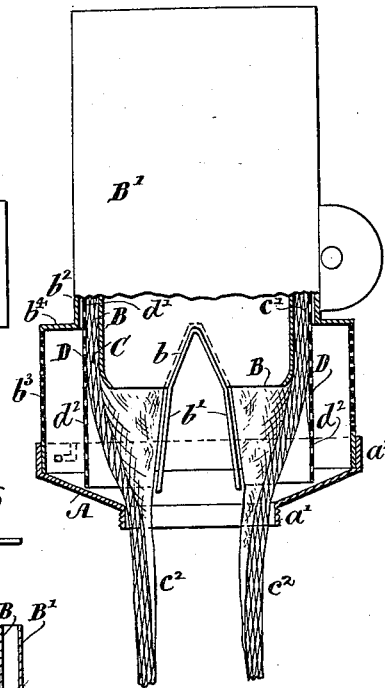


Fig. 5

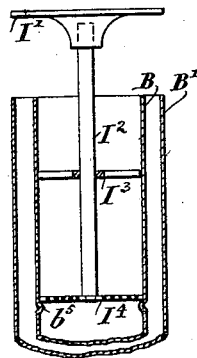


Fig. 4

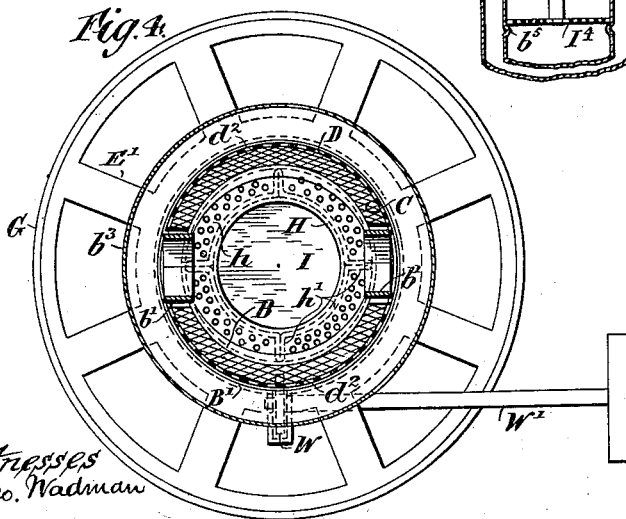
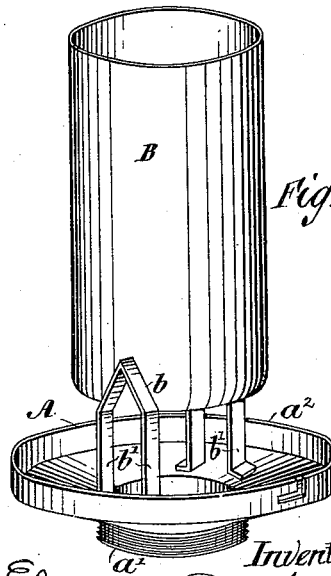


Fig. 3



Witnesses  
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# UNITED STATES PATENT OFFICE.

EBENEZER BLACKMAN, OF BROOKLYN, NEW YORK.

## LAMP-BURNER.

SPECIFICATION forming part of Letters Patent No. 346,890, dated August 10, 1886.

Application filed January 14, 1886. Serial No. 188,525. (No model.)

*To all whom it may concern:*

Be it known that I, EBENEZER BLACKMAN, of Brooklyn, in Kings county, and the State of New York, have invented a certain new and useful Improvement in Lamp-Burners, of which the following is a specification.

I will describe a lamp-burner embodying my improvement, and then point out the various features in the claims.

10 In the accompanying drawings, Figure 1 is a vertical section of a lamp-burner embodying my improvement. Fig. 2 is a sectional elevation of the wick-tube and base-plate, the section being taken in a plane at right angles to Fig. 1. Fig. 3 is a perspective view of the base-plate and the inner shell of the wick-tube. Fig. 4 is a horizontal section of the burner, taken at the plane of the dotted line  $x x$ , Fig. 1, looking upward. Fig. 5 is a vertical section of the wick-tube on a smaller scale, and a sectional elevation of a spreader with its ap-  
20 purtenances.

Similar letters of reference designate corresponding parts in all the figures.

25 A designates the base-plate of the burner. It is of annular form and imperforate excepting the central opening. The inner edge is bent downwardly to form a rim,  $a'$ , and the outer edge is bent upwardly to form a rim,  $a''$ . From the rim  $a''$  to the rim  $a'$  it inclines downwardly. The rim  $a'$  is externally screw-threaded and forms a means whereby the burner may be secured to an oil reservoir or fount. The wick-tube of the burner is of annular  
35 form, and is composed of two concentric shells, B B'. The inner shell, B, of the wick-tube is preferably notched at the lower edge. As shown it has two notches,  $b$ . These notches have secured to them by rivets  
40 or otherwise legs  $b'$ . The legs  $b'$  at the lower ends are secured to the base-plate A, preferably by being riveted thereto. It will be seen that in this way the legs serve to support the shell B in such position that it will be elevated considerably above the base-plate. Its lower  
45 edge is bent inwardly. The outer shell, B', of the wick-tube is not connected to the inner shell, B. At the lower edge it fits snugly within the rim  $a''$  of the base-plate, and is preferably secured thereto by a bayonet-lock. This  
50 shell B' may therefore be removed and replaced at pleasure. Its removal will be advantageous

when a new wick is to be inserted. The upper portion,  $b^2$ , of the outer shell, B', is distant from the inner shell only far enough to afford space 55 between it and the inner shell for the accommodation of the wick and wick-holder C, but its lower portion,  $b^3$ , is considerably larger and is perforated. A shoulder,  $b^4$ , is formed between the upper portion,  $b^2$ , and the lower 60 portion,  $b^3$ . The legs  $b'$ , whereby the inner shell is supported, are formed of strips of sheet metal bent flatwise, and arranged so that the outer edge of the upper part will extend close to the shoulder  $b^4$  of the outer shell, B'. 65 The wick C has a cylindric upper portion,  $c'$ , and bifurcate lower portions,  $c''$ . The cylindric portion fits between the inner shell, B, of the wick-tube and the portion  $b^2$  of the outer shell, B'. The bifurcate portions  $c''$  straddle 70 the legs  $b'$  and extend down through the central opening of the base-plate. The wick is secured by prongs or other means to a holder, D, having a circular upper portion,  $d'$ , and bifurcate lower portions,  $d''$ . The circular portion  $d'$  occupies a position above the legs  $b'$ . 75 The bifurcate portions straddle the legs  $b'$ , but do not extend through the central opening of the base-plate. The holder is made of metal, and has vertical rows of perforations, with 80 one row of which operates a spur-wheel, W, affixed to a shaft, W', that is journaled in a housing, with which the outer shell of the wick-tube is provided, and that has at one end a handle capable of being manipulated to ro- 85 tate it and the wheel, so as to effect the vertical adjustment of the wick-holder and wick. The central opening of the base-plate is smaller in diameter than the inner shell of the wick-tube and the circular portion of the wick; but, 90 owing to the large area of the central opening in the base-plate, the distance of the inner shell of the wick-tube is elevated above the base-plate, and by the rounding or bending inward of the lower edges of the inner shell of 95 the wick-tube the bifurcate portions of the wick can easily bend inward and pass through the bottom of the burner. I can therefore make the screw-threaded rim of the burner very much smaller than otherwise would be 100 practicable without interfering with the free and easy adjustability of the wick.

E designates a ring, which is supported by arms E', which are integral with it, and a ring,

B<sup>2</sup>, which fits snugly around the upper portion, b<sup>2</sup>, of the outer shell, B', of the wick-tube, and rests upon the shoulder b<sup>4</sup>. Within the ring E a perforated air-distributor, F, is  
 5 arranged. A conoidal deflector, G, is fitted to the ring E and supported by it. This deflector is shouldered at the base to form a chimney-gallery, G'.

H designates a perforated tube, which extends above the inner shell, B, of the wick-tube, and is closed at the top preferably by a cap or button, I, that extends beyond it, forming a spreader. As shown, the tube H is smaller in diameter than the inner shell of the  
 10 wick-tube, and has at the lower edge an outwardly-extending perforated flange, h, which extends to the inner shell of the wick-tube. Above this flange h wings h' are arranged. These wings steady the tube and center it  
 15 within the inner shell of the wick-tube. It will be seen that the perforated tube H and its flange h form a perforated diaphragm, which completely separates the flame which will emanate from the wick from the space below, and hence that it will be perfectly safe to employ the large central opening in the base-plate.  
 20 The flange h of the tube H rests on a rib, b<sup>5</sup>, formed in the inner shell of the wick-tube. The tube H can therefore be lifted out of place, and then the oil reservoir or fount to which the burner may be applied can be filled by pouring oil down through the inner shell of the wick-tube. The deflector G may be lifted off to facilitate the removal of the tube H or the  
 25 removal of the outer shell of the wick-tube.

In Fig. 5 I have shown that instead of the tube H and caps I, I can use a button, I, supported on a rod, I<sup>2</sup>, fastened to a spider, I<sup>3</sup>, and a perforated plate shaped diaphragm, I<sup>4</sup>. The  
 30 latter separates the space below it from the flame and rests on a rib, b<sup>5</sup>. This button, with its rod, the spider, and the diaphragm, may be lifted out. Air passes through the lower portion, b<sup>2</sup>, of the outer shell, B, of the wick-tube, which forms an air-distributor, and between  
 35 the legs of each pair into the space between the inner shell of the wick-tube. It then

ascends to the inner surface of the flame, escaping in small jets from the perforated tube H and its flange h. Air also passes through  
 40 the air-distributor F and up through the deflector G to the outer surface of the flame.

I have filed an application for United States Letters Patent for an improvement in lamp-burners, January 5, 1886, Serial No. 187,708. I do not herein claim anything claimed therein.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with a lamp-burner, of a base-plate, an annular wick-tube composed of an inner and an outer shell, the inner shell having an inwardly-turned lower edge, and being supported from the base-plate in an elevated position upon legs formed of strips of sheet metal bent flatwise and secured independently of each other to the base-plate and the inner shell of the wick-tube, said legs also forming air-passages whereby air may enter the space encircled by the inner shell of the wick-tube, the outer shell of the wick-tube  
 50 having an enlarged perforated lower portion, and being attached at its base to the base-plate independent of the inner shell, substantially as specified.

2. The combination, with a lamp-burner, of a base-plate, an annular wick-tube composed of an inner and an outer shell, the inner shell being supported from the base-plate in an elevated position by means of legs formed of strips of sheet metal bent flatwise and secured independently of each other to the base-plate and the inner shell of the wick-tube, said legs also forming air-passages whereby air may enter the space encircled by the inner shell of the wick-tube, the outer shell of the wick-tube  
 55 having an enlarged perforated lower portion, and being attached at its base to the base-plate independent of the inner shell, substantially as specified.

EBENEZER BLACKMAN.

Witnesses:

JAMES D. GRISWOLD,  
 DANIEL H. DRISCOLL.